Launch of WHO recommendations for care of the preterm or low-birth-weight infant

Thursday, 17 November 2022
World Prematurity Day

Interpretation is available in French. Please click on the Interpretation globe icon at the bottom of the screen.

Une interprétation est disponible en Français. Veuillez cliquer sur l'icône du globe d'interprétation au bas de votre écran.
Opening remarks

Dr Anshu Banerjee
Director, Department of Maternal, Newborn, Child and Adolescent Health and Ageing
World Health Organization Geneva
Agenda

Welcome & opening remarks
Dr Anshu Banerjee, WHO Geneva

Part 1: Recommendations and potential impact

WHO recommendations:
Dr Karen Edmond, WHO Geneva

What is important and new, and why:
Prof Vinod Paul, NITI Aayog India

Potential impact:
Dr Rajiv Bahl, Indian Council of Medical Research

Scaling up, what will it take:
Dr Gagan Gupta, UNICEF New York

Part 2: What the recommendations could mean for families and health services
Moderator: Prof Gary Darmstadt, Stanford University School of Medicine
Ms Silke Mader, Prof Carole Kenner, Prof Suman Rao, Prof Ebunoluwa Adejuyigbe, Prof Karim Manji, Prof Mohammed Shahidullah, Dr Shabina Ariff, Prof Zelee Hill

Part 3: Next steps
Plans for WHO implementation: Dr Rajesh Mehta (WHO Geneva, SEARO), Dr Shuchita Gupta (WHO Geneva, SEARO)

Closing remarks: Dr Anshu Banerjee
Part 1
New recommendations and potential impact
WHO recommendations for care of the preterm or low birth weight infant

Dr Karen Edmond
World Health Organization, Geneva
Recommendations

Recommendations:
https://apps.who.int/iris/bitstream/handle/10665/363697/9789240058262-eng.pdf

Web annexes:
https://apps.who.int/iris/bitstream/handle/10665/363698/9789240060043-eng.pdf

Evidence base. Web supplement:
https://apps.who.int/iris/bitstream/handle/10665/363699/9789240060050-eng.pdf
• 25 recommendations
• 11 new, 14 updated
• 11 strong, 14 conditional on particular contexts or limited evidence
• 1 good practice statement
A. Preventive and promotive care
- Cord care
- Kangaroo mother care
- Thermal care
- Feeding
- Micronutrients
- Probiotics
- Emollients
- Developmental care
- Massage
- Positioning
- Immunization
- Surveillance of growth, neurodevelopment, hearing, vision, disability

B. Care for complications
- Resuscitation
- Surfactant
- Continuous positive airway pressure
- Oxygen
- Methylxanthines
- Hypoglycaemia
- Hyperbilirubinaemia
- Infections
- Necrotizing enterocolitis
- Anaemia
- Growth, neurodevelopment, hearing, vision, disability

C. Family involvement and support
- Family involvement in routine care
- Family support:
  - Education and counselling
  - Discharge preparation
  - Peer support
- Home visits
- Parental leave and entitlements

Short-term outcomes
- Longer-term outcomes

• Included in this guideline
• Included in other WHO guidelines
## Summary of process

<table>
<thead>
<tr>
<th>Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formulate GDG and scoping</td>
</tr>
<tr>
<td>Specify review questions</td>
</tr>
<tr>
<td>38 systematic reviews</td>
</tr>
<tr>
<td>Grading of the quality and certainty of body of evidence</td>
</tr>
<tr>
<td>Evidence to decision framework development</td>
</tr>
<tr>
<td>Formulation of judgements and recommendations</td>
</tr>
<tr>
<td>Finalisation</td>
</tr>
<tr>
<td>Publishing</td>
</tr>
<tr>
<td>Implementation eg derivative tool and course updating</td>
</tr>
<tr>
<td>Monitoring, evaluation</td>
</tr>
</tbody>
</table>

Launch of WHO recommendations for care of the preterm or low-birth-weight infant
17 November 2022
Guideline development group (GDG)

• 25 members, 20 countries: Uganda, Nigeria, Ethiopia, Tanzania, USA, UK, Sweden, Germany, Lebanon, Yemen, Afghanistan, Argentina, Chile, India, Pakistan, Bangladesh, China, Vietnam, Philippines, Australia

• Expert neonatologists, paediatricians, nurses, patient representatives, qualitative researchers, public health specialists
GRADE evidence to decision framework

Effectiveness, certainty, values, acceptability, resources, feasibility, equity


Launch of WHO recommendations for care of the preterm or low-birth-weight infant
17 November 2022
Recommendations:
https://apps.who.int/iris/bitstream/handle/10665/363697/9789240058262-eng.pdf

Web annexes:
https://apps.who.int/iris/bitstream/handle/10665/363698/9789240060043-eng.pdf

Evidence base. Web supplement:
https://apps.who.int/iris/bitstream/handle/10665/363699/9789240060050-eng.pdf

Launch of WHO recommendations for care of the preterm or low-birth-weight infant
17 November 2022
### A. PREVENTIVE AND PROMOTIVE CARE

<table>
<thead>
<tr>
<th>Domain</th>
<th>Recommendation</th>
<th>Status</th>
<th>Strength/ type</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1a Any KMC</td>
<td>Kangaroo mother care (KMC) is recommended as routine care for all preterm or low-birth-weight infants. KMC can be initiated in the health-care facility or at home and should be given for 8-24 hours per day (as many hours as possible). (Strong recommendation, high-certainty evidence)</td>
<td>Updated</td>
<td>Strong</td>
</tr>
<tr>
<td>A.1b Immediate KMC</td>
<td>Kangaroo mother care (KMC) for preterm or low-birth-weight infants should be started as soon as possible after birth. (Strong recommendation, high-certainty evidence)</td>
<td>New</td>
<td>Strong</td>
</tr>
<tr>
<td>A.2 Mother’s own milk</td>
<td>Mother’s own milk is recommended for feeding of preterm or low-birth-weight (LBW) infants, including very preterm (&lt; 32 weeks’ gestation) or very LBW (&lt; 1.5 kg) infants. (Strong recommendation, low-certainty evidence)</td>
<td>Updated</td>
<td>Strong</td>
</tr>
<tr>
<td>A.3 Donor human milk</td>
<td>Donor human milk may be considered for feeding of preterm or low-birth-weight (LBW) infants, including very preterm (&lt; 33 weeks’ gestation) or very LBW (&lt; 1.5 kg) infants. (Conditional recommendation, moderate-certainty evidence)</td>
<td>Updated</td>
<td>Conditional</td>
</tr>
<tr>
<td>A.4 Multicomponent fortification of human milk</td>
<td>Multicomponent fortification of human milk is not routinely recommended for preterm or low-birth-weight (LBW) infants but may be considered for very preterm (&lt; 32 weeks’ gestation) or very LBW (&lt; 1.5 kg) infants. (Conditional recommendation, low-to-moderate-certainty evidence)</td>
<td>Updated</td>
<td>Conditional</td>
</tr>
<tr>
<td>A.5 Preterm formula</td>
<td>When mother’s own milk and donor human milk are not available, nutrient-enriched preterm formula may be considered for very preterm (&lt; 32 weeks’ gestation) or very low-birth-weight (&lt; 1.5 kg) infants. (Conditional recommendation, moderate-certainty evidence)</td>
<td>Updated</td>
<td>Conditional</td>
</tr>
<tr>
<td>A.6 Early initiation of enteral feeding</td>
<td>Preterm and low-birth-weight (LBW) infants, including very preterm (&lt; 32 weeks’ gestation) and very LBW (&lt; 1.5 kg) infants, should be fed as early as possible from the first day after birth. Infants who are able to breastfeed should be put to the breast as soon as possible after birth. If mother’s own milk is not available, donor human milk should be given whenever possible. (Strong recommendation, moderate-certainty evidence)</td>
<td>Updated</td>
<td>Strong</td>
</tr>
<tr>
<td>A.7 Responsive and scheduled feeding</td>
<td>In health-care facilities, scheduled feeding may be considered rather than responsive feeding for preterm infants born before 34 weeks’ gestation, until the infant is discharged. (Conditional recommendation, low-certainty evidence)</td>
<td>Updated</td>
<td>Conditional</td>
</tr>
<tr>
<td>A.8 Fast and slow advancement of feeding</td>
<td>In preterm or low-birth-weight (LBW) infants, including very preterm (&lt; 32 weeks’ gestation) or very LBW (&lt; 1.5 kg) infants, who need to be fed by an alternative feeding method to breastfeeding (e.g. gastric tube feeding or cup feeding), feed volumes can be increased by up to 30 ml/kg per day. (Conditional recommendation, moderate-certainty evidence)</td>
<td>Updated</td>
<td>Conditional</td>
</tr>
<tr>
<td>A.9 Duration of exclusive breastfeeding</td>
<td>Preterm or low-birth-weight infants should be exclusively breastfed until 6 months of age. (Strong recommendation, very-low-certainty evidence)</td>
<td>Updated</td>
<td>Strong</td>
</tr>
<tr>
<td>A.10a Iron supplementation</td>
<td>Enteral iron supplementation is recommended for human-milk-fed preterm or low-birth-weight infants who are not receiving iron from another source. (Strong recommendation, moderate-certainty evidence)</td>
<td>Updated</td>
<td>Strong</td>
</tr>
<tr>
<td>A.10b Zinc supplementation</td>
<td>Enteral zinc supplementation may be considered for human-milk-fed preterm or low-birth-weight infants who are not receiving zinc from another source. (Conditional recommendation, low-certainty evidence)</td>
<td>Updated</td>
<td>Conditional</td>
</tr>
<tr>
<td>A.10c Vitamin D supplementation</td>
<td>Enteral vitamin D supplementation may be considered for human-milk-fed preterm or low-birth-weight infants who are not receiving vitamin D from another source. (Conditional recommendation, low-certainty evidence)</td>
<td>Updated</td>
<td>Conditional</td>
</tr>
<tr>
<td>A.10d Vitamin A supplementation</td>
<td>Enteral vitamin A supplementation may be considered for human-milk-fed very preterm (&lt; 32 weeks’ gestation) or very low-birth-weight (&lt; 1.5 kg) infants who are not receiving vitamin A from another source. (Conditional recommendation, low-certainty evidence)</td>
<td>Updated</td>
<td>Conditional</td>
</tr>
<tr>
<td>A.11 Probiotics</td>
<td>Probiotics may be considered for human-milk-fed very preterm infants (&lt; 32 weeks’ gestation). (Conditional recommendation, moderate-certainty evidence)</td>
<td>New</td>
<td>Conditional</td>
</tr>
<tr>
<td>A.12 Emollients</td>
<td>Application of topical oil to the body of preterm or low-birth-weight infants may be considered. (Conditional recommendation, low-certainty evidence)</td>
<td>New</td>
<td>Conditional</td>
</tr>
</tbody>
</table>
## B. CARE FOR COMPLICATIONS

<p>| B.1 CPAP for respiratory distress syndrome | Continuous positive airway pressure (CPAP) therapy is recommended in preterm infants with clinical signs of respiratory distress syndrome. <em>(Strong recommendation, moderate-certainty evidence)</em> | Updated | Strong |
| B.2 CPAP immediately after birth | Continuous positive airway pressure (CPAP) therapy may be considered immediately after birth for very preterm infants (&lt; 32 weeks' gestation), with or without respiratory distress. <em>(Conditional recommendation, low-certainty evidence)</em> | New | Conditional |
| B.3 CPAP pressure source (bubble CPAP) | For preterm infants who need continuous positive airway pressure (CPAP) therapy, bubble CPAP may be considered rather than other pressure sources (e.g. ventilator CPAP). <em>(Conditional recommendation, low-certainty evidence)</em> | New | Conditional |
| B.4 Methylxanthines for treatment of apnoea | Caffeine is recommended for the treatment of apnoea in preterm infants. <em>(Strong recommendation, moderate-certainty evidence)</em> | New | Strong |
| B.5 Methylxanthines for extubation | Caffeine is recommended for the extubation of preterm infants born before 34 weeks’ gestation. <em>(Strong recommendation, moderate-certainty evidence)</em> | New | Strong |
| B.6 Methylxanthines for prevention of apnoea | Caffeine may be considered for the prevention of apnoea in preterm infants born before 34 weeks' gestation. <em>(Conditional recommendation, low-certainty evidence)</em> | New | Conditional |</p>
<table>
<thead>
<tr>
<th>C. FAMILY INVOLVEMENT AND SUPPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C.1 Family involvement</strong></td>
</tr>
<tr>
<td>Family involvement in the routine care of preterm or low-birth-weight infants in health-care facilities is recommended. <em>(Strong recommendation, low- to moderate-certainty evidence)</em></td>
</tr>
<tr>
<td><strong>C.2 Family support</strong></td>
</tr>
<tr>
<td>Families of preterm or low-birth-weight infants should be given extra support to care for their infants, starting in health-care facilities from birth and continued during follow-up post-discharge. The support may include education, counselling and discharge preparation from health workers, and peer support. <em>(Conditional recommendation, very-low-certainty evidence)</em></td>
</tr>
<tr>
<td><strong>C.3 Home visits</strong></td>
</tr>
<tr>
<td>Home visits by trained health workers are recommended to support families to care for their preterm or low-birth-weight infant. <em>(Strong recommendation, moderate-certainty evidence)</em></td>
</tr>
<tr>
<td><strong>C.4 Parental leave and entitlements</strong></td>
</tr>
<tr>
<td>Parental leave and entitlements should address the special needs of mothers, fathers and other primary caregivers of preterm or low-birth-weight infants. <em>(Good practice statement)</em></td>
</tr>
</tbody>
</table>
What is important and new, and why?

Dr Vinod K. Paul
Member (Health, Nutrition, Women & Child Development)
National Institution for Transforming India- NITI Aayog, India

Launch of WHO recommendations for care of the preterm or low-birth-weight infant
17 November 2022
WHO guidelines for the care of preterm or LBW infants were last updated in 2011, 2013 and 2015.
11 strong recommendations (interventions that are recommended)

• New
  • Immediate KMC
  • Caffeine for apnoea and extubation
  • Family involvement
  • Home visits

• Updated
  • KMC
  • Mothers own milk
  • Early initiation of enteral feeding
  • Duration of exclusive breastfeeding to six months
  • Iron supplementation
  • CPAP for RDS
14 conditional recommendations (interventions that may be considered)

• New
  • Probiotics
  • Emollients
  • CPAP immediately after birth
  • Caffeine to prevent apnoea
  • Education and counselling, peer support, discharge preparedness

• Updated
  • Donor human milk
  • Multicomponent fortifier
  • Preterm formula
  • Zinc, Vitamin A, D
  • Scheduled feeding
  • Fast advancement of feeding
Good practice statement

Parental leave and entitlements should address the special needs of mothers, fathers and other primary caregivers of preterm or low-birth-weight infants.
No recommendation

No recommendation on the use of calcium, phosphorous, and multiple micronutrient supplementation due to insufficient evidence for their effectiveness
## New strong recommendations

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| **A.1a Any KMC** | Kangaroo mother care (KMC) is recommended as routine care for all preterm or low-birth-weight infants. KMC can be initiated in the health-care facility or at home and should be given for 8-24 hours per day (as many hours as possible).  
(Strong recommendation, high-certainty evidence) | Updated | Strong |
| **A.1b Immediate KMC** | Kangaroo mother care (KMC) for preterm or low-birth-weight infants should be started as soon as possible after birth.  
(Strong recommendation, high-certainty evidence) | New | Strong |
| **B.4 Methykanthines for treatment of apnoea** | Caffeine is recommended for the treatment of apnoea in preterm infants.  
(Strong recommendation, moderate-certainty evidence) | New | Strong |
| **B.5 Methykanthines for extubation** | Caffeine is recommended for the extubation of preterm infants born before 34 weeks’ gestation.  
(Strong recommendation, moderate-certainty evidence) | New | Strong |
| **C.1 Family involvement** | Family involvement in the routine care of preterm or low-birth-weight weight infants in health-care facilities is recommended.  
(Strong recommendation, low- to moderate-certainty evidence) | New | Strong |
| **C.3 Home visits** | Home visits by trained health workers are recommended to support families to care for their preterm or low-birth-weight infant.  
(Strong recommendation, moderate-certainty evidence) | New | Strong |
Potential impact of the new WHO recommendations

Dr Rajiv Bahl
Indian Council of Medical Research
Launch of WHO recommendations for care of the preterm or low-birth-weight infant
17 November 2022
Scaling up, what will it take?

Dr Gagan Gupta
UNICEF New York
Part 2
Moderated panel discussion
What the recommendations could mean for families and health services
Panel discussion

What the recommendations could mean for families and health services

Moderated by
Prof Gary Darmstadt
Stanford University School of Medicine
Panel discussion

Why these recommendations are important for families and services, how will they help, how they could be taken forward, what are the challenges, what is needed for implementation?

Launch of WHO recommendations for care of the preterm or low birth weight infant

17 November 2022
Part 3: Next steps
Dr Rajesh Mehta
Consultant and formerly Regional Advisor for NCAH, WHO South-East Asia Regional Office

Plans for WHO implementation

Launch of WHO recommendations for care of the preterm or low-birth-weight infant
17 November 2022
# Implementation

<table>
<thead>
<tr>
<th>Every Newborn Action Plan (ENAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WHO standards and recommendations</strong></td>
</tr>
<tr>
<td><strong>Content of care</strong></td>
</tr>
<tr>
<td>Tools - clinical practice guidance, hospital protocols, pocketbooks, handbooks, chartbooklets, electronic</td>
</tr>
<tr>
<td>Competencies - training courses, supportive supervision, CQI</td>
</tr>
<tr>
<td><strong>Indicators and monitoring</strong></td>
</tr>
<tr>
<td><strong>Experience of care</strong></td>
</tr>
<tr>
<td><strong>Building health system</strong></td>
</tr>
</tbody>
</table>
Implementation

• WHO-UNICEF Implementation Guide for scaling up level-2 inpatient care for small or sick newborns in districts
  • Based on the health system oriented 10 components and content of care identified during Global consultation on SSNC in Dec 2021
  • Defining evidence-based norms to organize level-2 inpatient SSNC services in a district setting in LMICs: e.g., infrastructure, staffing, essential equipment including CPAP and standard provisions

• Small or sick newborn care course
• MNH indicators eg MONITOR and EMNOC frameworks to monitor implementation
• Updating existing technical products
Launch of WHO recommendations for care of the preterm or low-birth-weight infant
17 November 2022
Launch of WHO recommendations for care of the preterm or low-birth-weight infant
17 November 2022
Implementation Strategy for specific recommendations: The KMC example

Dr Shuchita Gupta
WHO Geneva and WHO South-East Asia Regional Office

Launch of WHO recommendations for care of the preterm or low-birth-weight infant
17 November 2022
Launch of WHO recommendations for care of the preterm or low-birth-weight infant
17 November 2022
Closing remarks

Dr Anshu Banerjee
Director, Department of Maternal, Newborn, Child and Adolescent Health and Ageing
World Health Organization Geneva
Access the recommendations

Recommendations: 
https://apps.who.int/iris/bitstream/handle/10665/363697/9789240058262-eng.pdf

Web annexes: 
https://apps.who.int/iris/bitstream/handle/10665/363698/9789240060043-eng.pdf

Evidence base. Web supplement: 
https://apps.who.int/iris/bitstream/handle/10665/363699/9789240060050-eng.pdf
Additional resources

**WHO Recommendations and standards**
- WHO recommendations on antenatal corticosteroids for improving preterm birth outcomes
- WHO recommendation on tocolytic therapy for improving preterm birth outcomes
- Standards for improving the quality of care for small and sick newborns in health facilities (who.int)

**Facts and data**
- Updated factsheet – WHO fact sheet
- UNICEF UNIGME webportal CME Info - Child Mortality Estimates
- Information on the forthcoming decade edition of Born Too Soon
- Every Newborn 2025 Coverage Target & Milestones Launch Sep 3 2020 (who.int)

**Tools and courses**
- Management of the sick young infant aged up to 2 months: Chart booklet (who.int)
- Essential Newborn Care Training course (who.int)

**Other publications**
- New WHO recommendations for the care of preterm or low birthweight infants have the potential to transform maternal and newborn health-care delivery (thelancet.com)

Launch of WHO recommendations for care of the preterm or low-birth-weight infant
17 November 2022
Thank you for joining us!